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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|------------------------|---------------------|------------------|
| 10/691,742 | 10/22/2003 | Peter Michael Baumgart | HSJ920030149US1 | 7763 |

35987 7590 12/28/2004

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EXAMINER

MERCEDES, DISMERY E

ART UNIT PAPER NUMBER

2651

DATE MAILED: 12/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|------------------------|---------------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 10/691,742 | BAUMGART ET AL. | |
| | Examiner | Art Unit | |
| | Dismery E Mercedes | 2651 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 October 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>10/22/2003</u> . | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

1. The information disclosure statement (IDS) submitted on October 22, 2003 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.
2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: for example "405" of FIG.4; "505" of FIG.5; "1206" of FIG.12. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.
3. Figures 1-3 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.121(d)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Double Patenting

4. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

5. Claims 1-22 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-22 of copending Application No. 10/691,752. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims in 10/691,752 are apparatus claims, which correspond to the method step claims 1-22 of the present application.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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7. Claims 1, 10-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Feng et al. (US 6,529,342 B1) in view of Kuroda et al. (US 5,546,374).

As to Claim 1, Feng et al. discloses a hard disk drive comprising: at least one hard disk (col.3, line 22); at least one slider corresponding to each disk (col.3, line 44);

Feng et al. discloses a bias voltage source applying a predetermined bias voltage between a slider body and the corresponding hard disk (col.3, lines 15-17 & col.4, lines 39-40), but fails to particularly disclose the predetermined bias voltage including a DC component and an AC component.

However, Kuroda et al. discloses such (as depicted in FIG.8 & col.9, lines 48-50). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to implement Kuroda's et al. technique to the Feng's et al. system, the motivation being because it would provide Feng's et al. system with the enhanced capability of performing reproduction with high signal to noise ratio (col.10, line 34-35 of Kuroda et al.).

As to Claims 10 and 11, in the obvious combination, Kuroda further the predetermined bias voltage is applied to the slider body with respect to the hard disk and applied to the hard disk with respect to the slider body (as depicted in Figures 6-8).

As to Claim 12, in the obvious combination, Feng et al. discloses the bias voltage source controls a magnitude of the predetermined voltage based on the detected flying-height spacing of the slider body (col.4, lines 33-38, col.5-col.6, Figures 4-12).

8. Claim 4 is rejected as being unpatentable over Feng et al. (US 6,529,342 B1) in view of Kuroda et al. (US 5,546,374), further in view of Chapin et al. (US 6,785,081 B2).

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The combination of Feng et al. and Kuroda et al. discloses the hard disk drive as claimed in base claim 1, but they fail to particularly disclose the flying-height spacing of the slider body is detected using a Laser Doppler Vibrometer.

However, Chapin et al. discloses such (col.7, line 24-26). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to implement Chapin's et al. technique to the system taught by Feng et al. and Kuroda et al, the motivation being because Chapin teaches that the laser doppler vibrometer can be equipped with quad-cell supplement in order to determine the pitch and roll of the slider and is more space friendly (col.7, lines 15-21 and 26-28 of Chapin et al.).

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

- Schreck (US 6,005,736) discloses a method and means for active shock protection in a magnetic disk device using electrostatic forces.
- Kiely et al. (US 2003/0102218 A1) discloses a head-disk stiction reduction.
- Riddering et al. (US 6,700,724 B2) discloses a contact detection and calibration for electrostatic fly height control in a disc drive.
- Boutaghou et al. (US 6,501,606 B2) discloses a fly height control for a read/write head over patterned media.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dismery E Mercedes whose telephone number is 703-306-4082. The examiner can normally be reached on Monday - Friday, from 9:00am - 4:00pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sinh Tran can be reached on 703-305-4040. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Dismery E Mercedes
Examiner
Art Unit 2651

DM

DEM 12/27/04



SINH TRAN
SUPERVISORY PATENT EXAMINER